

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
19 February 2004 (19.02.2004)

PCT

(10) International Publication Number
WO 2004/015059 A3

(51) International Patent Classification⁷: **C12N 9/12**,
C12P 19/34, 21/02

(21) International Application Number:
PCT/IB2003/003936

(22) International Filing Date: 25 July 2003 (25.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
02291959.1 2 August 2002 (02.08.2002) EP

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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
22 April 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHODS AND COMPOSITIONS FOR IN VITRO SYNTHESIS OF BIOLOGICAL MACROMOLECULES IN A CELL-FREE SYSTEM ENRICHED WITH ATP-SULFURYLASE

(57) Abstract: The present invention provides methods and composition for enhancing in vitro synthesis of biological macromolecules in a cell-free system where ATP is required as a primary energy source, wherein said cell-free system is enriched with ATP-sulfurylase. The invention relates also to as cell-free systems and cell-free extracts enriched with ATP-sulfurylase for enhancing in vitro synthesis of any biological macromolecules.

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INTERNATIONAL SEARCH REPORT

International Application No

/IB 03/03936

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N9/12 C12P19/34 C12P21/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C12P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, WPI Data, PAJ, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98/22615 A (LIFE TECHNOLOGIES INC) 28 May 1998: (1998-05-28) example 2	1-3, 5-17, 19-21
A	KIM DONG-MYUNG ET AL: "Regeneration of adenosine triphosphate from glycolytic intermediates for cell-free protein synthesis." BIOTECHNOLOGY AND BIOENGINEERING, vol. 74, no. 4, 20 August 2001 (2001-08-20), pages 309-316, XP002227479 ISSN: 0006-3592 cited in the application the whole document	1-21



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Date of the actual completion of the international search

29 January 2004

Date of mailing of the international search report

10/02/2004

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

IB 03/03936

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9822615 A	28-05-1998	US 6291164 B1	18-09-2001
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		US 2001055792 A1	27-12-2001